10/774,082
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LYcook 7/7/07

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     (FILE 'HOME' ENTERED AT 13:45:08 ON 07 JUL 2007)

     FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 13:45:22 ON 07
     JUL 2007
L1            26 S GRADIFLOW AND ANTIBOD?
L2            14 DUPLICATE REMOVE L1 (12 DUPLICATES REMOVED)
L3             0 S L2 AND PD<1998
L4           140 S GRADIFLOW?
L5            23 S L4 AND PD<1999
L6             7 DUPLICATE REMOVE L5 (16 DUPLICATES REMOVED)
L7             7 S L6 AND PROTEIN?

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d his

     (FILE 'HOME' ENTERED AT 13:45:08 ON 07 JUL 2007)

     FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 13:45:22 ON 07
     JUL 2007
L1            26 S GRADIFLOW AND ANTIBOD?
L2            14 DUPLICATE REMOVE L1 (12 DUPLICATES REMOVED)
L3             0 S L2 AND PD<1998
L4           140 S GRADIFLOW?
L5            23 S L4 AND PD<1999
L6             7 DUPLICATE REMOVE L5 (16 DUPLICATES REMOVED)
L7             7 S L6 AND PROTEIN?

=>
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ANSWER 1 OF 7 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

AN 1997:385617 BIOSIS

DN PREV199799684820

TI Purification by reflux electrophoresis of whey proteins and of a recombinant protein expressed in Dictyostelium discoideum.

✓ pulled 4/2007

AU Corthals, Garry L.; Collins, Brett M.; Mabbutt, Bridget C.; Williams, Keith L. [Reprint author]; Gooley, Andrew A.

CS Macquarie Univ. Centre Analytical Biotechnol., Sch. Biological Sci., Macquarie Univ., Sydney, NSW 2109, Australia

SO Journal of Chromatography A, (1997) Vol. 773, No. 1-2, pp. 299-309.
CODEN: JOCRAM. ISSN: 0021-9673.

DT Article

LA English

ED Entered STN: 10 Sep 1997
Last Updated on STN: 10 Sep 1997

AB Protein purification that combines the use of molecular mass exclusion membranes with electrophoresis is particularly powerful as it uses properties inherent to both techniques. The use of membranes allows efficient processing and is easily scaled up, while electrophoresis permits high resolution separation under mild conditions. The Gradiflow apparatus combines these two technologies as it uses polyacrylamide membranes to influence electrokinetic separations. The reflux electrophoresis process consists of a series of cycles incorporating a forward phase and a reverse phase. The forward phase involves collection of a target protein that passes through a separation membrane before trailing proteins in the same solution. The forward phase is repeated following clearance of the membrane in the reverse phase by reversing the current. We have devised a strategy to establish optimal reflux separation parameters, where membranes are chosen for a particular operating range and protein transfer is monitored at different pH values. In addition, forward and reverse phase times are determined during this process. Two examples of the reflux method are described. In the first case, we describe the purification strategy for proteins from a complex mixture which contains proteins of higher electrophoretic mobility than the target protein. This is a two-step procedure, where first proteins of higher mobility than the target protein are removed from the solution by a series of reflux cycles, so that the target protein remains as the leading fraction. In the second step the target protein is collected, as it has become the leading fraction of the remaining proteins. In the second example we report the development of a reflux strategy which allowed a rapid one-step preparative purification of a recombinant protein, expressed in Dictyostelium discoideum. These strategies demonstrate that the Gradiflow is amenable to a wide range of applications, as the protein of interest is not necessarily required to be the leading fraction in solution.

CC Genetics - Plant 03504
Genetics - Animal 03506
Biochemistry methods - Proteins, peptides and amino acids 10054
Biophysics - Methods and techniques 10504
Food microbiology - Biosynthesis, bioassay and fermentation 39007
Plant physiology - Chemical constituents 51522
Plant physiology - Apparatus and methods 51524
Invertebrata: comparative, experimental morphology, physiology and pathology - Protozoa 64002

IT Major Concepts
Biochemistry and Molecular Biophysics; Bioprocess Engineering; Genetics; Methods and Techniques; Physiology

IT Miscellaneous Descriptors
BIOCHEMISTRY AND BIOPHYSICS; EXPRESSION SYSTEM; METHODOLOGY; PURIFICATION; PURIFICATION METHOD; RECOMBINANT PROTEINS; REFLUX ELECTROPHORESIS; WHEY PROTEINS

ORGN Classifier
Myxophyta 15700
Super Taxa
Fungi; Plantae
Organism Name
Dictyostelium discoideum
Myxophyta
Taxa Notes
Fungi, Microorganisms, Nonvascular Plants, Plants
ORGN Classifier
Sarcodina 35300
Super Taxa
Protozoa; Invertebrata; Animalia
Organism Name
Sarcodina
Taxa Notes
Animals, Invertebrates, Microorganisms, Protozoans

ANSWER 1 OF 7 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

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SO Journal of Chromatography A, (1997) Vol. 773, No. 1-2, pp. 299-309.
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CC Genetics - Plant 03504
Genetics - Animal 03506
Biochemistry methods - Proteins, peptides and amino acids 10054
Biophysics - Methods and techniques 10504
Food microbiology - Biosynthesis, bioassay and fermentation 39007
Plant physiology - Chemical constituents 51522
Plant physiology - Apparatus and methods 51524
Invertebrata: comparative, experimental morphology, physiology and pathology - Protozoa 64002

IT Major Concepts
Biochemistry and Molecular Biophysics; Bioprocess Engineering; Genetics; Methods and Techniques; Physiology

IT Miscellaneous Descriptors
BIOCHEMISTRY AND BIOPHYSICS; EXPRESSION SYSTEM; METHODOLOGY; PURIFICATION; PURIFICATION METHOD; RECOMBINANT PROTEINS; REFLUX ELECTROPHORESIS; WHEY PROTEINS

ORGN Classifier
Myxophyta 15700
Super Taxa
Fungi; Plantae
Organism Name
Dictyostelium discoideum
Myxophyta
Taxa Notes
Fungi, Microorganisms, Nonvascular Plants, Plants
ORGN Classifier
Sarcodina 35300
Super Taxa
Protozoa; Invertebrata; Animalia
Organism Name
Sarcodina
Taxa Notes
Animals, Invertebrates, Microorganisms, Protozoans

ANSWER 4 OF 7 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

AN 1996:181832 BIOSIS

DN PREV199698737961

TI Preparative affinity membrane electrophoresis.

AU Horvath, Z. Stephen [Reprint author]; Gooley, Andrew A.; Wrigley, Colin W.; Margolis, Joel; Williams, Keith L.

CS Macquarie Univ. Cent. Analytical Biochem., North Ryde, NSW 2113, Australia

SO Electrophoresis, (1996) Vol. 17, No. 1, pp. 224-226.
CODEN: ELCTDN. ISSN: 0173-0835.

DT Article

LA English

ED Entered STN: 29 Apr 1996
Last Updated on STN: 29 Apr 1996

AB Using the patented Gradiflow system in conjunction with newly developed affinity membranes, the suitability of an electrokinetic technique for affinity fractionation was investigated. Blue dextran incorporated into an affinity membrane was used to deplete a solution of horse serum of albumin, with the result that a majority of serum proteins were enriched tenfold relative to albumin. The technique, when fully developed, would offer some advantages over affinity chromatography, since to a degree it is possible to control which components of the sample are presented to the affinity matrix. Furthermore, the technique would extend the capabilities of the already multifunctional Gradiflow system.

CC Biochemistry methods - Proteins, peptides and amino acids 10054
Biochemistry studies - Proteins, peptides and amino acids 10064
Biophysics - Methods and techniques 10504
Biophysics - Membrane phenomena 10508

IT Major Concepts
Biochemistry and Molecular Biophysics; Membranes (Cell Biology); Methods and Techniques

IT Miscellaneous Descriptors
ANALYTICAL METHOD; PROTEIN; PURIFICATION METH

ANSWER 4 OF 7 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

AN 1996:181832 BIOSIS

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AU Horvath, Z. Stephen [Reprint author]; Gooley, Andrew A.; Wrigley, Colin W.; Margolis, Joel; Williams, Keith L.

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CC Biochemistry methods - Proteins, peptides and amino acids 10054
Biochemistry studies - Proteins, peptides and amino acids 10064
Biophysics - Methods and techniques 10504
Biophysics - Membrane phenomena 10508

IT Major Concepts
Biochemistry and Molecular Biophysics; Membranes (Cell Biology); Methods and Techniques

IT Miscellaneous Descriptors
ANALYTICAL METHOD; PROTEIN; PURIFICATION METH

√pulled LC

ANSWER 5 OF 7 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
AN 1995:16043 BIOSIS
DN PREV199598030343
TI Multifunctional apparatus for electrokinetic processing of proteins.
AU Horvath, Z. Stephen; Corthals, Garry L.; Wrigley, Colin W.; Margolis, Joel
CS Macquarie Univ. Cent. Analytical Biotechnol., Sydney NSW 2109, Australia
SO Electrophoresis, (1994) Vol. 15, No. 7, pp. 968-971.
CODEN: ELCTDN. ISSN: 0173-0835.
DT Article
LA English
ED Entered STN: 11 Jan 1995
Last Updated on STN: 11 Jan 1995
CC Biochemistry methods - Nucleic acids, purines and pyrimidines 10052
Biochemistry studies - Proteins, peptides and amino acids 10064
Biophysics - Methods and techniques 10504
Biophysics - Molecular properties and macromolecules 10506
Biophysics - Membrane phenomena 10508
External effects - Electric, magnetic and gravitational phenomena 10610
IT Major Concepts
Biochemistry and Molecular Biophysics; Membranes (Cell Biology); Methods and Techniques
IT Miscellaneous Descriptors
CHARGE; CONCENTRATION; ELECTRODIALYSIS; GRADIFLOW; PURIFICATION METHOD; SIZE

ANSWER 5 OF 7 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
AN 1995:16043 BIOSIS
DN PREV199598030343
TI Multifunctional apparatus for electrokinetic processing of proteins.
AU Horvath, Z. Stephen; Corthals, Garry L.; Wrigley, Colin W.; Margolis, Joel
CS Macquarie Univ. Cent. Analytical Biotechnol., Sydney NSW 2109, Australia
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CODEN: ELCTDN. ISSN: 0173-0835.
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Last Updated on STN: 11 Jan 1995
CC Biochemistry methods - Nucleic acids, purines and pyrimidines 10052
Biochemistry studies - Proteins, peptides and amino acids 10064
Biophysics - Methods and techniques 10504
Biophysics - Molecular properties and macromolecules 10506
Biophysics - Membrane phenomena 10508
External effects - Electric, magnetic and gravitational phenomena 10610
IT Major Concepts
Biochemistry and Molecular Biophysics; Membranes (Cell Biology); Methods and Techniques
IT Miscellaneous Descriptors
CHARGE; CONCENTRATION; ELECTRODIALYSIS; GRADIFLOW; PURIFICATION METHOD; SIZE

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ANSWER 3 OF 7 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
AN 1996:375530 BIOSIS
DN PREV199699097886
TI The role of pH and membrane porosity in preparative electrophoresis.
AU Corthals, Garry L.; Margolis, Joel; Williams, Keith L. [Reprint author]; Gooley, Andrew A.
CS Macquarie Univ. Centre Analytical Biotechnology, Sch. Biological Sci., Macquaire Univ., North Ryde N.S.W., 2109, Sydney, Australia
SO Electrophoresis, (1996) Vol. 17, No. 4, pp. 771-775.
CODEN: ELCTDN. ISSN: 0173-0835.
DT Article
LA English
ED Entered STN: 26 Aug 1996
Last Updated on STN: 26 Aug 1996
AB The Gradiflow is a preparative electrophoresis apparatus, allowing fractionation based on a combination of size and charge of proteins in their native (unreduced) form. The preparative fractionation of two proteins of similar size and isoelectric point is demonstrated using the Gradiflow. A separation membrane of appropriate pore size was chosen and then fractionation was "fine tuned" by selecting an appropriate buffer pH to accentuate charge differences between the proteins of interest. Complete separation of mg quantities of bovine serum albumin and ovalbumin was achieved within 40 min.*
CC Biochemistry methods - Proteins, peptides and amino acids 10054
Biochemistry studies - General 10060
Biochemistry studies - Proteins, peptides and amino acids 10064
Biophysics - Methods and techniques 10504
Biophysics - Molecular properties and macromolecules 10506
Biophysics - Membrane phenomena 10508
IT Major Concepts
Biochemistry and Molecular Biophysics; Membranes (Cell Biology)
IT Miscellaneous Descriptors
ALBUMIN; ANALYTICAL METHOD; GRADIFLOW; OVALBUMIN

ANSWER 3 OF 7 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
AN 1996:375530 BIOSIS
DN PREV199699097886
TI The role of pH and membrane porosity in preparative electrophoresis.
AU Corthals, Garry L.; Margolis, Joel; Williams, Keith L. [Reprint author]; Gooley, Andrew A.
CS Macquarie Univ. Centre Analytical Biotechnology, Sch. Biological Sci., Macquaire Univ., North Ryde N.S.W., 2109, Sydney, Australia
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Biochemistry studies - General 10060
Biochemistry studies - Proteins, peptides and amino acids 10064
Biophysics - Methods and techniques 10504
Biophysics - Molecular properties and macromolecules 10506
Biophysics - Membrane phenomena 10508
IT Major Concepts
Biochemistry and Molecular Biophysics; Membranes (Cell Biology)
IT Miscellaneous Descriptors
ALBUMIN; ANALYTICAL METHOD; GRADIFLOW; OVALBUMIN

√ pulled 4/cook

AN 1997:290572 BIOSIS
DN PREV199799589775
TI Prefractionation of protein samples prior to two-dimensional electrophoresis.
AU Corthals, Garry L.; Molloy, Mark P.; Herbert, Ben R.; Williams, Keith L. [Reprint author]; Gooley, Andrew A.
CS MUCAB/APAF, Sch. Biol. Sci., Macquarie Univ., Sydney, NSW 2109, Australia
SO Electrophoresis, (1997) Vol. 18, No. 3-4, pp. 317-323.
CODEN: ELCTDN. ISSN: 0173-0835.
DT Article
LA English
ED Entered STN: 9 Jul 1997
Last Updated on STN: 9 Jul 1997
AB Thousands of proteins may be visualized on a two-dimensional (2-D) get, but only hundreds are present at levels sufficient for chemical analysis. Therefore, prefractionation of protein samples prior to 2-D polyacrylamide gel electrophoresis (PAGE) will be important for the investigation of proteins that are present at sub-picogram levels in physiological samples. We describe an approach to prefractionate protein samples prior to 2-D PAGE using the Gradiflow, which is a new (preparative) electrokinetic membrane apparatus designed to fractionate proteins in a number of different ways. We have fractionated human serum under nonreducing conditions using the 'reflux' mode, in which proteins are fractionated according to their relative mobility under controlled electrophoretic conditions, where the current is periodically reversed. We describe how fractionation occurs and present examples of enrichment of specific proteins.
CC Biochemistry methods - General 10050
Biochemistry studies - General 10060
IT Major Concepts
Biochemistry and Molecular Biophysics
IT Miscellaneous Descriptors
BIOCHEMISTRY AND BIOPHYSICS; CYTOCHEMICAL METHOD; METHODOLOGY; PROTEIN PREFRACTIONATION; PROTEIN SAMPLES; TWO DIMENSIONAL ELECTROPHORESIS

ANSWER 2 OF 7 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
AN 1997:290572 BIOSIS
DN PREV199799589775
TI Prefractionation of protein samples prior to two-dimensional electrophoresis.
AU Corthals, Garry L.; Molloy, Mark P.; Herbert, Ben R.; Williams, Keith L. [Reprint author]; Gooley, Andrew A.
CS MUCAB/APAF, Sch. Biol. Sci., Macquarie Univ., Sydney, NSW 2109, Australia
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CC Biochemistry methods - General 10050
Biochemistry studies - General 10060
IT Major Concepts
Biochemistry and Molecular Biophysics
IT Miscellaneous Descriptors
BIOCHEMISTRY AND BIOPHYSICS; CYTOCHEMICAL METHOD; METHODOLOGY; PROTEIN PREFRACTIONATION; PROTEIN SAMPLES; TWO DIMENSIONAL ELECTROPHORESIS

ANSWER 6 OF 7 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

AN 1992:343363 BIOSIS

DN PREV199294035588; BA94:35588

TI RAPID TEN-MINUTE PORE-GRADIENT ELECTROPHORESIS OF PROTEINS AND PEPTIDES IN MICROGRAD GELS.

AU WRIGLEY C W [Reprint author]; MARGOLIS J

CS CSIRO WHEAT RES UNIT, DIV PLANT INDUSTRY, PO BOX 7, NORTH RYDE, NSW 2113, AUST

SO Applied and Theoretical Electrophoresis, (1992) Vol. 3, No. 1, pp. 13-16.
CODEN: ATELEM. ISSN: 0954-6642.

DT Article

FS BA

LA ENGLISH

ED Entered STN: 29 Jul 1992
Last Updated on STN: 29 Jul 1992

AB Precast gradient gels of short migration length (25 mm) have been developed to provide rapid electrophoretic separation without loss of resolution. These Microgrand gels have been prepared in gel ranges (conventional and unique) to match pore-gradient electrophoresis conditions to proteins/peptides ranging in size from several hundreds to millions. The Hylinx Microgrand gel combines an extreme gel range (6 to 48% polyacrylamide) with a novel crosslinker to provide sieving of polypeptides, and pore-limit electrophoresis of the smallest proteins (e.g. insulin monomer). All gel ranges (such as 3 to 30%) provide zone sharpening in routine analysis of conventional protein mixtures (e.g. serum) within 10 min electrophoresis at 200 to 300 volts. The gels are thin (1 mm) and thus stain quickly, but the gel cassette is of conventional overall width (83 mm), thus fitting many apparatus designs and accommodating 12 samples. The gels are finding valuable use in screening applications, requiring the electrophoretic analysis of many samples, and in cases where a rapid answer is needed, such as monitoring protein purification. The gels have proved particularly useful, in-house, for the latter application in developing Gradipore's new large-scale preparative electrophoresis system, the Gradiflow.

CC Biochemistry methods - Proteins, peptides and amino acids 10054
Biochemistry studies - Proteins, peptides and amino acids 10064
Biophysics - Methods and techniques 10504
Blood - Blood and lymph studies 15002

IT Major Concepts
Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport and Circulation)

IT Miscellaneous Descriptors
PROTEIN FRACTIONATION SERUM PROTEIN PURIFICATION METHOD

ANSWER 6 OF 7 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

AN 1992:343363 BIOSIS

DN PREV199294035588; BA94:35588

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CODEN: ATELEM. ISSN: 0954-6642.

DT Article

FS BA

LA ENGLISH

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Last Updated on STN: 29 Jul 1992

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Biochemistry studies - Proteins, peptides and amino acids 10064
Biophysics - Methods and techniques 10504
Blood - Blood and lymph studies 15002

IT Major Concepts
Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport and Circulation)

IT Miscellaneous Descriptors
PROTEIN FRACTIONATION SERUM PROTEIN PURIFICATION METHOD

ANSWER 7 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1996:435344 CAPLUS
DN 125:136744
ED Entered STN: 24 Jul 1996
TI Large-scale preparative electrophoresis of proteins
AU Wrigley, Colin W.; Margolis, Joel; Manusu, H. Perry
CS Div. Plant Industry, CSIRO, North Ryde, 2113, Australia
SO American Biotechnology Laboratory (1996), 14(6), 8, 12
CODEN: ABLAEY; ISSN: 0749-3223
PB International Scientific Communications
DT Journal
LA English
CC 9-1 (Biochemical Methods)
Section cross-reference(s): 48, 66
AB The LM-1000 Gradiflow system (Gradipore Ltd., Sydney, Australia) is described for the title process that has the following advantages: it permits purification of 1 species of macromol. from a complex mixture in quantity; it provides high purity for the target macromol.; it gives rapid throughput in the sample ranges of many milligrams to many grams with potential for even larger throughput, preferably on a continuous basis; it works under conditions that would not cause protein denaturation or contamination with extraneous compds.; and it is adaptable to other applications such as salt removal and concentrating functions.
ST protein preparative membrane electrophoresis LM1000 Gradiflow
IT Concentrators
Membrane, biological
(large-scale preparative electrophoresis of proteins)
IT Proteins, preparation
RL: PUR (Purification or recovery); PREP (Preparation)
(large-scale preparative electrophoresis of proteins)
IT Salts, processes
RL: REM (Removal or disposal); PROC (Process)
(large-scale preparative electrophoresis of proteins)
IT Electrophoresis and Ionophoresis
(preparative, apparatus, large-scale preparative electrophoresis of proteins)

ANSWER 7 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1996:435344 CAPLUS
DN 125:136744
ED Entered STN: 24 Jul 1996
TI Large-scale preparative electrophoresis of proteins
AU Wrigley, Colin W.; Margolis, Joel; Manusu, H. Perry
CS Div. Plant Industry, CSIRO, North Ryde, 2113, Australia
SO American Biotechnology Laboratory (1996), 14(6), 8, 12
CODEN: ABLAEY; ISSN: 0749-3223
PB International Scientific Communications
DT Journal
LA English
CC 9-1 (Biochemical Methods)
Section cross-reference(s): 48, 66
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ST protein preparative membrane electrophoresis LM1000 Gradiflow
IT Concentrators
Membrane, biological
(large-scale preparative electrophoresis of proteins)
IT Proteins, preparation
RL: PUR (Purification or recovery); PREP (Preparation)
(large-scale preparative electrophoresis of proteins)
IT Salts, processes
RL: REM (Removal or disposal); PROC (Process)
(large-scale preparative electrophoresis of proteins)
IT Electrophoresis and Ionophoresis
(preparative, apparatus, large-scale preparative electrophoresis of proteins)

10/774,082
Lycook

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d his

     (FILE 'HOME' ENTERED AT 16:16:50 ON 07 JUL 2007)

     FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 16:17:14 ON 07
     JUL 2007
L1           726 S (ANTIBOD? SEPARAT?)
L2         13175 S (PROTEIN SEPARAT?)
L3            17 S L1 AND L2
L4             4 S L3 AND ELECTRO?
L5             4 DUPLICATE REMOVE L4 (0 DUPLICATES REMOVED)
L6            26 S GRADIFLOW AND ANTIBOD?
L7            14 DUPLICATE REMOVE L6 (12 DUPLICATES REMOVED)
L8             0 S L7 AND PD<1998
L9            14 DUPLICATE REMOVE L7 (0 DUPLICATES REMOVED)
L10           13 S MONOCLONAL AND ASCITIS
L11           11 DUPLICATE REMOVE L10 (2 DUPLICATES REMOVED)
L12            7 S L11 AND PD<1998
L13           79 S L1 AND ELECTROPHOR?
L14           59 DUPLICATE REMOVE L13 (20 DUPLICATES REMOVED)
L15           45 S L14 AND PD<1998
L16           21 S L15 AND PROTEIN?

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d his

     (FILE 'HOME' ENTERED AT 16:16:50 ON 07 JUL 2007)

     FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 16:17:14 ON 07
     JUL 2007
L1           726 S (ANTIBOD? SEPARAT?)
L2         13175 S (PROTEIN SEPARAT?)
L3            17 S L1 AND L2
L4             4 S L3 AND ELECTRO?
L5             4 DUPLICATE REMOVE L4 (0 DUPLICATES REMOVED)
L6            26 S GRADIFLOW AND ANTIBOD?
L7            14 DUPLICATE REMOVE L6 (12 DUPLICATES REMOVED)
L8             0 S L7 AND PD<1998
L9            14 DUPLICATE REMOVE L7 (0 DUPLICATES REMOVED)
L10           13 S MONOCLONAL AND ASCITIS
L11           11 DUPLICATE REMOVE L10 (2 DUPLICATES REMOVED)
L12            7 S L11 AND PD<1998
L13           79 S L1 AND ELECTROPHOR?
L14           59 DUPLICATE REMOVE L13 (20 DUPLICATES REMOVED)
L15           45 S L14 AND PD<1998
L16           21 S L15 AND PROTEIN?

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ANSWER 5 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1998:291202 CAPLUS

DN 129:119844

ED Entered STN: 20 May 1998

TI Separation of monoclonal antibody by protein A hollow fiber affinity membrane adsorption

AU Bao, Shixiang; Su, Zhiguo

CS Department of Bioengineering, South China University of Technology, Canton, 510641, Peop. Rep. China

SO Mo Kexue Yu Jishu (1997), 17(4), 21-24
CODEN: MKYJEF; ISSN: 0254-6140

PB Mo Kexue Yu Jishu Bianjibu

DT Journal

LA Chinese

CC 9-16 (Biochemical Methods)

AB The adsorption properties of protein A hollow fiber affinity membrane were studied using human γ-Ig as a model protein. Anti-human chorionic gonadotropin monoclonal antibody was purified from mouse ascites. SDS-polyacrylamide gel electrophoretic anal. showed that the purified antibody has high purity.

ST affinity membrane chorionic gonadotropin antibody; hollow fiber affinity membrane antibody sepn

IT Proteins, specific or class
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(A; separation of monoclonal antibody by protein A hollow fiber affinity membrane adsorption)

IT Antibodies
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(monoclonal; separation of monoclonal antibody by protein A hollow fiber affinity membrane adsorption)

IT Membranes, nonbiological
Pregnancy
(separation of monoclonal antibody by protein A hollow fiber affinity membrane adsorption)

IT 9002-61-3, Chorionic gonadotropin
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(separation of monoclonal antibody by protein A hollow fiber affinity membrane adsorption)

ANSWER 5 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN

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IT Membranes, nonbiological
Pregnancy
(separation of monoclonal antibody by protein A hollow fiber affinity membrane adsorption)

IT 9002-61-3, Chorionic gonadotropin
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(separation of monoclonal antibody by protein A hollow fiber affinity membrane adsorption)

ANSWER 16 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1966:450690 CAPLUS
DN 65:50690
OREF 65:9509e-f
ED Entered STN: 22 Apr 2001
TI Preparative electrophoretic separation of rabbit serum proteins and antibodies
AU Freeman, M. J.; Stavitsky, A. B.
CS Western Reserve Univ., Cleveland, OH
SO Immunochemistry (1966), 3(4), 257-66
CODEN: IMCHAZ; ISSN: 0019-2791
DT Journal
LA English
CC 67 (Immunochemistry)
AB The application of a medium-free, continuous-flow electrophoretic separation was evaluated for the characterization and purification of rabbit serum proteins and antibody. Electrophoretic sepns. of large vols. of whole antiserum, serum, or fractions which corresponded well to the distribution of serum proteins in agar gel or other types of electrophoresis were obtained. Considerable electrophoretic heterogeneity was observed for the antibody of 2 pooled sera. The electrophoretic method described is a useful addnl. method for the preliminary physicochem. purification of antibody. 23 references.
IT Proteins
(blood serum, separation by continuous-flow electrophoresis)
IT Antibodies
(sepn. of, by continuous-flow electrophoresis)

ANSWER 16 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN
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IT Proteins
(blood serum, separation by continuous-flow electrophoresis)
IT Antibodies
(sepn. of, by continuous-flow electrophoresis)

ANSWER 10 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1990:135559 CAPLUS
DN 112:135559
ED Entered STN: 13 Apr 1990
TI Method and apparatus for continuous isoelectric separation of proteins
IN Stimpson, Donald Irvine
PA Monsanto Co., USA
SO Eur. Pat. Appl., 15 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C07K003-16
ICS B01D013-00
CC 9-1 (Biochemical Methods)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 323948	A2	19890712	EP 1989-870001	19890104 <--
	EP 323948	A3	19911121		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	US 5114555	A	19920519	US 1988-273780	19881123 <--
	DK 8900019	A	19890706	DK 1989-19	19890104 <--
	NO 8900038	A	19890706	NO 1989-38	19890104 <--
	JP 02006739	A	19900110	JP 1989-45	19890104 <--
PRAI	US 1988-140855	A	19880105		
	US 1988-273780	A	19881123		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 323948	ICM	C07K003-16
	ICS	B01D013-00
	IPCI	C07K0003-16 [ICM,4]; B01D0013-00 [ICS,4]
	IPCR	G01N0027-447 [I,C*]; G01N0027-447 [I,A]; B01D0057-02 [I,C*]; B01D0057-02 [I,A]; C07K0001-00 [I,C*]; C07K0001-28 [I,A]; C07K0016-00 [I,C*]; C07K0016-00 [I,A]
US 5114555	IPCI	G01N0027-26 [ICM,5]; B01D0057-02 [ICS,5]
	IPCR	G01N0027-447 [I,C*]; G01N0027-447 [I,A]; B01D0057-02 [I,C*]; B01D0057-02 [I,A]; C07K0001-00 [I,C*]; C07K0001-28 [I,A]; C07K0016-00 [I,C*]; C07K0016-00 [I,A]
	NCL	204/601.000; 204/610.000; 204/644.000
DK 8900019	IPCI	B01D0013-01 [ICM,4]
	IPCR	G01N0027-447 [I,C*]; G01N0027-447 [I,A]; B01D0057-02 [I,C*]; B01D0057-02 [I,A]; C07K0001-00 [I,C*]; C07K0001-28 [I,A]; C07K0016-00 [I,C*]; C07K0016-00 [I,A]
NO 8900038	IPCI	C07K0003-14 [ICM,4]; C07K0003-12 [ICS,4]
	IPCR	G01N0027-447 [I,C*]; G01N0027-447 [I,A]; B01D0057-02 [I,C*]; B01D0057-02 [I,A]; C07K0001-00 [I,C*]; C07K0001-28 [I,A]; C07K0016-00 [I,C*]; C07K0016-00 [I,A]
JP 02006739	IPCI	G01N0027-26 [ICM,4]

AB The title method and apparatus, for the continuous separation of a target protein or protein fraction from a protein mixture containing ≥2 proteins at a pH equal to the pI of the target protein, is provided. The apparatus includes ≥1 nonionic, nonelec. conductive porous membrane conduit through which the protein mixture-containing solution is passed. The conduit, of polysulfone, polyether sulfone, polypropylene, or polyvinylidene difluoride, is positioned to serve as a septum between the buffer chambers and is adapted to permit free flow of electrophoretically driven proteins across the diameter of the conduit. The membrane is

ANSWER 10 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN

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DN 112:135559
ED Entered STN: 13 Apr 1990
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PA Monsanto Co., USA
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CODEN: EPXXDW
DT Patent
LA English
IC ICM C07K003-16
ICS B01D013-00
CC 9-1 (Biochemical Methods)
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	US 5114555	A	19920519	US 1988-273780	19881123 <--
	DK 8900019	A	19890706	DK 1989-19	19890104 <--
	NO 8900038	A	19890706	NO 1989-38	19890104 <--
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PRAI	US 1988-140855	A	19880105		
	US 1988-273780	A	19881123		

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	IPCI	C07K0003-16 [ICM,4]; B01D0013-00 [ICS,4]
	IPCR	G01N0027-447 [I,C*]; G01N0027-447 [I,A]; B01D0057-02 [I,C*]; B01D0057-02 [I,A]; C07K0001-00 [I,C*]; C07K0001-28 [I,A]; C07K0016-00 [I,C*]; C07K0016-00 [I,A]
US 5114555	IPCI	G01N0027-26 [ICM,5]; B01D0057-02 [ICS,5]
	IPCR	G01N0027-447 [I,C*]; G01N0027-447 [I,A]; B01D0057-02 [I,C*]; B01D0057-02 [I,A]; C07K0001-00 [I,C*]; C07K0001-28 [I,A]; C07K0016-00 [I,C*]; C07K0016-00 [I,A]
	NCL	204/601.000; 204/610.000; 204/644.000
DK 8900019	IPCI	B01D0013-01 [ICM,4]
	IPCR	G01N0027-447 [I,C*]; G01N0027-447 [I,A]; B01D0057-02 [I,C*]; B01D0057-02 [I,A]; C07K0001-00 [I,C*]; C07K0001-28 [I,A]; C07K0016-00 [I,C*]; C07K0016-00 [I,A]
NO 8900038	IPCI	C07K0003-14 [ICM,4]; C07K0003-12 [ICS,4]
	IPCR	G01N0027-447 [I,C*]; G01N0027-447 [I,A]; B01D0057-02 [I,C*]; B01D0057-02 [I,A]; C07K0001-00 [I,C*]; C07K0001-28 [I,A]; C07K0016-00 [I,C*]; C07K0016-00 [I,A]
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impregnated with a hydrogel to decrease its hydraulic permeability. The conduit is subjected to the influence of an elec. field substantially perpendicular to fluid flow through it, resulting in movement of all charged proteins from the conduit lumen. The target protein, which is unaffected by the elec. field when the pH is its pI, is collected from the conduit outlet in substantially purified form. Thus, a polypropylene fiber membrane (0.2 μm pore diameter) was impregnated with 1% (weight/volume) agarose and the dry membrane was wetted 1st in Me2CHOH, then in water. The rewetted membrane was submerged in 1% agarose at .apprx.60° for 16-24 h, then drained of excess hydrogel, cooled, and mounted in the apparatus chamber (schematic diagrams included). Using 0.06 M barbital buffer (pH 8.6) as carrier buffer, the apparatus was used to sep. γ-globulins from a protein mixture also containing cytochrome C and phycocyanin. The presence of γ-globulins inside the membrane and the selective removal of cytochrome C and phycocyanin into the surrounding buffer chambers was confirmed by gel electrophoresis anal.

ST app continuous isoelec protein sepn; membrane conduit continuous isoelec protein sepn; polypropylene agarose membrane isoelec protein sepn

IT Proteins, analysis
RL: ANST (Analytical study)
(apparatus for continuous isoelec. separation of, pH in relation to)

IT Membranes
(as conduit in apparatus for continuous isoelec. protein separation)

IT Ceramic materials and wares
Polysulfones, uses and miscellaneous
RL: USES (Uses)
(membrane conduit of, in apparatus for continuous isoel

impregnated with a hydrogel to decrease its hydraulic permeability. The conduit is subjected to the influence of an elec. field substantially perpendicular to fluid flow through it, resulting in movement of all charged proteins from the conduit lumen. The target protein, which is unaffected by the elec. field when the pH is its pI, is collected from the conduit outlet in substantially purified form. Thus, a polypropylene fiber membrane (0.2 μm pore diameter) was impregnated with 1% (weight/volume) agarose and the dry membrane was wetted 1st in Me2CHOH, then in water. The rewetted membrane was submerged in 1% agarose at .apprx.60° for 16-24 h, then drained of excess hydrogel, cooled, and mounted in the apparatus chamber (schematic diagrams included). Using 0.06 M barbital buffer (pH 8.6) as carrier buffer, the apparatus was used to sep. γ-globulins from a protein mixture also containing cytochrome C and phycocyanin. The presence of γ-globulins inside the membrane and the selective removal of cytochrome C and phycocyanin into the surrounding buffer chambers was confirmed by gel electrophoresis anal.

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